

REMARKS

Claims 1-15 are currently pending in the subject application and are presently under consideration. Claims 1, 6, and 11 have been amended as shown on p. 3 of the Reply. The Examiner is thanked for courtesies extended during an interview conducted on February 15, 2008. The main focus of the interview was on deficiencies of the 102 rejection. While the presented matter generally related to all the claims, the crux was upon wording of the amendments to claims 1, 6 and 11. This wording has been revised according to Examiner's suggestions. Examiner agreed that amended claims overcame Becker (reference 1) and Shah-Heydari (reference 2). The interview was conducted with Ronald Krosky (Reg. No. 58,564), Allan D. Shapiro, and Examiner Chang.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 1-3 Under 35 U.S.C. §102(e)

Claims 1-3 stand rejected under 35 U.S.C. §102(e) as being anticipated by Becker *et al.* (US 7,117,264). Withdrawal of this rejection is requested in view of the amendments to claims 1 and 2, and the following comments. In particular, Becker does not disclose or suggest each and every aspect set forth in the subject claims.

A single prior art reference anticipates a patent claim only if it ***expressly or inherently describes each and every limitation set forth in the patent claim.*** *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); *See Verdegaa Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The ***identical invention must be shown in as complete detail as is contained in the ... claim.*** *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (emphasis added).

Applicants' claimed subject matter relates to a system to establish pairwise associations in a decentralized fashion. Applicant's focus on pairwise communication stems from the claimed applications to protein bindings, social networks and decentralized computing. In protein bindings, association relies on the process of molecular complementarity of unique protein-binding sites. Although a multidomain protein with numerous independent binding sites

can bind numerous other proteins simultaneously, a single protein-binding site can only interact with one only other protein at a time. The protein-binding site is the functional unit in this interaction, and thus pairwise associations are the central focus of this application area. Similarly, social networks involve associations between individuals and numerous other individuals. However, to interact in a meaningful social fashion, an individual can only process communication from a single other individual at a discrete point in time. Interaction with several individuals in a social network usually involves serial rather than parallel interactions. Moreover, implementation of social networks in a decentralized computing environment (and other applications of decentralized computing) by necessity involves serial interactions through a given pair of communication ports.

It is clear from the original specification of the invention and amended claim 1 that this pairwise nature of communication is central to the subject matter herein. Establishing communication links between nodes of the system is an end in and of itself. As such, once a link is established, the *state of the node that received the original query is set to true and the content of its neighbors array or equivalent data structure that contains information specifying neighbors of that node that are available for communication is erased*. Erasing this information increases processing speed and minimizes data storage requirements.

Becker fails to teach or suggest the above-mentioned novel aspects. Moreover, Becker teaches away from these novel aspects. The system in Becker is designed principally with file sharing applications in mind. As such, although some aspects of the system are analogous to applicant's, not all aspects are shared, and the overall design of the system is very different. The immediate goal of peer-to-peer communication in Becker is to produce an aggregated list of peer nodes consisting of all nodes in communication with the node with which initial communication was established. This list is then used to identify nodes at which the desired file resides. Because Becker does not anticipate social networking and related applications, Becker fails to anticipate the need for efficient pairwise communication that minimizes memory storage requirements. By necessity, Becker teaches away from the importance of erasing the contents of a neighbor array once a match is made. Indeed, the contents of the analogous array following the match are crucial to function of the system described in Becker.

In view of at least the foregoing, it is readily apparent that Becker does not anticipate or suggest the subject invention as recited in independent claim 1 (or claims 2 and 3, which depend

there from) and in fact teaches away from the subject invention. Accordingly, it is respectfully requested that this rejection be withdrawn.

II. Rejection of Claims 4-15 Under 35 U.S.C. §103(a)

Claims 4-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Becker, in view of Shah-Heydari (US 2003/0126299). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Becker and Shah-Heydari, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention and, in fact, teach away from limitations of the claimed invention.

Independent claims 6 and 11 recite features similar to that discussed *supra* regarding independent claim 1. Shah-Heydari does not make up for the deficiencies of Becker with respect to this claim. Accordingly, it is respectfully requested that this rejection be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP2198US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number below.

Respectfully submitted,

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